

## EXHIBIT B

**CONFIDENTIAL REPORT**  
**BEHAVIORAL SLEEP EVALUATION**

**Name:** Cortne Maresse Robinson

**Date of Birth:** December 15, 1990

**Date of Evaluation:** November 9, 2017

**Location:** Polunsky Prison, Livingston, TX

**Evaluator:** Candice Alfano, Ph.D.

**Date of Report:** January 8, 2018

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**REASON FOR REFERRAL:**

Federal Deputy Defender Donna Coltharp requested the current evaluation of Mr. Cortne Robinson with the goal of gaining specific information and details regarding his previous and current sleep-wake patterns and associated functioning, including during the developmental period of adolescence when the capital crime for which he has been sentenced took place.

**BACKGROUND INFORMATION:**

Mr. Robinson is a 26 year-old, right-handed, African American male currently serving time on death row at Polunsky prison in South Livingston, Texas. Background information, including medical, family, social, academic and legal history was made available through case records. According to psychological testing conducted in June 2017, Mr. Robinson meets diagnostic criteria for post-traumatic stress disorder (PTSD) and major depressive disorder (MDD), which are believed to have been present since adolescence.

**EVALAUTION SETTING:**

Mr. Robinson was evaluated at the Polunsky prison facility from approximately 11:00am to 2:00pm in a small private room with a round table and two chairs, typical of a standardized testing environment. Mr. Robinson was brought to the room in shackles by two armed guards. The door to the room included a pass-through window which allowed for Mr. Robinson's hands to be cuffed and un-cuffed behind his back for transitioning to and from the evaluation. A guard was positioned outside the room visible through a large window throughout the evaluation.

**MEASURES ADMINISTERED:**

Duke Structured Interview for Sleep Disorders (DSISD)  
Epworth Sleepiness Scale (ESS)  
Unstructured clinical interview

**BEHAVIORAL OBSERVATIONS:**

Mr. Robinson presented as physically-fit, attractive, black man. He appeared sleepy upon arrival at the testing room and later explained that he had been woken up by the guards just prior to the evaluation. He was oriented to person, place and time. A small tattoo was visible on his right

cheek which read 'west side' denoting the neighborhood where he spent his formative years. He was well-groomed with a short afro, beard, and mustache. Mr. Robinson was calm and alert throughout the evaluation, though he yawned several times. His affect was relatively restricted and he spoke mostly in a soft voice. He smiled only once when talking about music.

Mr. Robinson was consistently polite, cooperative, and motivated to answer the evaluator's questions. He maintained appropriate eye contact throughout the session and spoke in full, articulate sentences with a more advanced vocabulary than would be expected for someone with his education level (e.g., he used words such as 'pragmatic'). When asked about his advanced vocabulary, he explained that he likes to read books. He recalled one particular book he has read titled, *How We Decide* (Mariner Books, 2009), which discusses various findings from neuroscience in exploring how humans make decisions.

Mr. Robinson demonstrated remarkable reflection upon and remorse for his previous crimes during the interview. He also shared several thoughtful observations regarding the behavior of the prison guards and other inmates which demonstrated both insight and empathy for others. For example, he acknowledged that, although guards are often discourteous toward inmates, they have a difficult job requiring them to maintain order at all times. He further observed that many inmates 'mouth-off' to guards because they feel powerless, but that they ultimately make things harder for themselves in doing so. Consistent with the evaluator's observations, Mr. Robinson stated that he is always patient and compliant with the prison guards. Overall, findings from this evaluation are believed to be valid and reliable.

#### **CURRENT SLEEP PATTERNS:**

Mr. Robinson explained that since arriving at Polunsky he does not follow a regular sleep-wake schedule. He described his sleep to occur in 1 to 3 hour blocks rather than one primary, nocturnal, consolidated sleep period. However, he does on rare occasions sleep for an extended period of time (e.g., 15 hours) - an expected consequence of chronic sleep deprivation. He stated that he often remains awake during the nighttime and early morning hours and falls asleep around 5:00am. While this pattern existed prior to his incarceration, Mr. Robinson clarified that it is currently reinforced by a fear that he will not be woken up by guards for breakfast when it is served around 3:00am, which would result in his missing this meal. When asked to estimate the total amount of sleep he receives in a 24 hour period he was unable to formulate a guess, but estimated that he takes 3 to 4 'naps' per day. He further reported that he does not experience and/or remember any dreams, which is to be expected since dream mentation primarily occurs during rapid eye movement (REM) sleep occupying the second half of the nighttime sleep period. Mr. Robinson also described experiencing occasional sleep paralysis, a parasomnia characterized by temporary inability to move upon falling asleep or awakening, talking in his sleep, and nocturia (urination during sleep). These parasomnias all commonly result from severe sleep deprivation. He does not believe he snores but also stated that he often wakes with a dry mouth, which is suggestive of possible sleep-disordered breathing. Mr. Robinson stated that he never feels rested or refreshed, even after a long sleep, but also that he is not as tired now as he was during his teenage years.

#### **SLEEP HISTORY:**

Childhood: Mr. Robinson recalled that he liked to sleep as a child and does not remember having any problems falling or staying asleep or experiencing daytime sleepiness. He explained that he shared a room with his 2 siblings prior to the age of about 9 years and cannot recall their ever telling him that he exhibited strange behaviors in his sleep (e.g., sleep talking, sleepwalking, snoring). Mr. Robinson stated that he excelled at soccer and football as a child and that sports were very important to him and kept him busy. He recalled feeling fatigued after a day of school (in a gifted and talented classroom) followed by soccer or football practice. Regular academic demands and physical activity likely helped to maintain a regular, healthy sleep-wake pattern during his childhood years.

The Paper Route: Mr. Robinson recollected that he began helping his mother with her nighttime paper route during the summer prior to his 5<sup>th</sup> grade year. Initially, Mr. Robinson and his siblings would sleep for a few hours in the evening, wake up to complete the route, take a brief nap in the morning, and then go to school. However, Mr. Robinson recalled that as he entered adolescence, he stopped sleeping in the evening before the paper route because he “just didn’t feel sleepy”. This circadian pattern is consistent with the normative, biological sleep changes that occur during adolescence rendering sleep during the evening hours difficult (if not impossible) for many teenagers. Mr. Robinson recalled that instead of sleeping before the paper route, he would usually fall asleep at his desk in school after he finished all of his work. He explained that, prior to entering junior high school he did not get into trouble with teachers for sleeping in class because he was “smart” and able to finish all of his work beforehand.

Adolescence: When Mr. Robinson entered junior high school (7<sup>th</sup> and 8<sup>th</sup> grade), academic records corroborate his report of “repercussions” for an abnormal sleep-wake schedule maintained by the paper route. Beginning in 2005, he was repeatedly tardy for school, disciplined for sleeping in class, and/or truant. Mr. Robinson recalled that because he would get into trouble for sleeping he would sometimes skip class and go to the school library to sleep. It is notable that although school records indicate Mr. Robinson ‘refused’ to stay awake in class (disciplinary referral note dated October 29, 2008), the level of sleep deprivation he was experiencing at this time would have rendered it virtually impossible to maintain wakefulness when sitting in a quiet setting such as a classroom. Upon reflection, he also recalled falling asleep in the middle of a party and while writing rap music as an adolescent – activities he enjoyed. Unsurprisingly, Mr. Robinson’s grades soon dropped, he stopped playing sports, and he engaged in an increasing number of risk-taking behaviors (e.g., driving under-age).

During the evaluation, Mr. Robinson was asked to retrospectively report upon his daytime sleepiness level during his late adolescent years (between the ages of 16 to 18) using the Epworth Sleepiness Scale (ESS), a valid, reliable, 8-item questionnaire. The ESS asks respondents to rate, on a 4-point scale, their usual chances of dozing off or falling asleep while engaged in eight different activities such as riding in a car, watching TV, or sitting in a quiet place. Total scores (the sum of 8 items) range from 0 to 24, with higher ESS scores indicating a higher sleep propensity in daily life (i.e., daytime sleepiness). **Mr. Robinson’s sleep propensity during adolescence is consistent with a severe, excessive level of sleepiness warranting immediate medical attention (total score = 16).** In clinical studies, similar scores are found among patients with serious sleep disorders, including severe obstructive sleep apnea and narcolepsy, and can result in being legally prohibited from driving a motorized vehicle or operating heavy machinery until effective treatment is sought.

*Criminal Activity:* Mr. Robinson stated that he began getting in trouble with the law in the 10th grade. Records indicate he was arrested five times for burglary between the ages of 16 and 17 years. During this period he failed out of high school but maintained the paper route and his erratic sleep-wake schedule. Similar to his current sleep pattern in prison, his sleep occurred in short (2-3 hour), unscheduled periods dictated primarily by an inability to maintain wakefulness. During this same period, he recalled various ‘strange’ experiences consistent with symptoms of extreme sleep deprivation including visual hallucinations and micro-sleeps, defined as sudden shifts from wakefulness to sleep lasting for a fraction of a second up to 2 minutes. Mr. Robinson referred to these episodes as “lost time” and recalled that he would be unsure of how long he had been asleep after regaining consciousness. Micro-sleeps are known to be extremely dangerous and potentially life-threatening when they occur in situations that demand alertness and quick decision making. Given the severity of his sleep deprivation at the time, it is unsurprising that Mr. Robinson is unable to recall any planning, forethought, or consideration of consequences related to his criminal activity. He acknowledged that all burglaries were completed in relative haste when he (and his friends) needed money or basic resources (e.g., food).

*Capital Crime:* With regard to the crime committed on September 20, 2009, consistent with his recollections for other crimes, he does not recall when he last slept or who came up with the idea to burglarize that night. He also stated that the specific house targeted was identified hastily that evening with little thought. The gun in Mr. Robinson’s possession was reportedly acquired randomly during a burglary that occurred approximately 2 weeks earlier. He stated that he was unfamiliar with and had never fired this type of handgun before, but also that he had no intention of firing it on the night of September 20, 2009. As described by Mr. Robinson, he was taken by surprise when the victim suddenly “got up and rushed” him, grabbing him by the collar. Mr. Robinson explained that his entire musculature tensed at that point and that the gun fired as part of a startle response. He does not recall pulling the trigger but does recall “feeling frozen” immediately afterward and as if he was dreaming. Mr. Robinson recalled being in a similar dream-like state while riding in the police vehicle after his arrest.

## DIAGNOSTIC FINDINGS:

Beginning in his adolescent years and continuing to the current day, Mr. Robinson fulfils diagnostic criteria for **irregular sleep-wake rhythm disorder** (G47.23) and **insufficient sleep syndrome** (F51.12) based on the International Classification of Disorders – tenth edition (ICD-10). The former is a relatively rare sleep disorder characterized by the absence of circadian pattern in an individual’s sleep-wake cycle. Instead, random naps take place throughout the 24-hour period replacing one primary nocturnal sleep episode, with substantial irregularity from day to day. Sufferers are typically very sleepy while awake and experience functional impairment in social, familial, and occupational domains. Irregular sleep-wake rhythm disorder is considered a serious condition and has been referred to as an ‘invisible disability’ based on its deleterious impacts on health, behavior, and functioning.

However, most patients with irregular sleep-wake rhythm disorder typically attain a normal (i.e., adequate) total amount of sleep within a 24 hour period. In Mr. Robinson’s case, there is reliable evidence of chronically-insufficient sleep beginning in his adolescent years and persisting to today. The absence of normal dream mentation as well as the presence of parasomnias (i.e., sleep paralysis and nocturia), micro-sleeps, visual hallucinations, and a high sleep propensity are

conclusive evidence of severe sleep deprivation warranting immediate attention. Thus, diagnostic criteria for insufficient sleep syndrome are also met.

It should also be noted that previous psychological testing determined Mr. Robinson to fulfill diagnostic criteria for **post-traumatic stress disorder** (F43.1) and **major depressive disorder** (F33.9) both currently and historically. Since both psychiatric conditions are intrinsically associated with sleep disruption, it is likely that the presence of these comorbid conditions contribute to the presence of severe sleep disruption since adolescence.

## **EXECUTIVE SUMMARY:**

In light of the findings presented above, the role of sleep deprivation merits considerable appreciation in Mr. Robinson's case. Adequate sleep is essential for the most basic of human functions including health and survival. Critically, the restorative functions of sleep rely not only on the total amount of sleep achieved but on its continuity (i.e., one continuous, extended period). Thus, even when an adequate total amount of sleep is achieved within a 24-hour period via several isolated naps, feelings of excessive sleepiness and being "torn down", as Mr. Robinson repeatedly described, inevitably result.

As a pre-adolescent, Mr. Robinson began keeping an atypical sleep schedule due to a nighttime paper route (a major source of income for his family). Although he was initially able to maintain high levels of academic and athletic performance given his natural strengths in these areas, chronic, inadequate sleep took a toll by 2005 as evidenced by repeated lateness for school, being unable to maintain wakefulness in class, and truancy. Testing based on the Epworth Sleepiness Scale (ESS) reveals a level of sleepiness at this time suggestive of a severe sleep disorder requiring immediate medical attention. Importantly, is not uncommon for individuals scoring similarly on the ESS to be prohibited from driving a motorized vehicle or operating heavy machinery given the level of danger posed to themselves and others.

The atypical developmental course of Mr. Robinson's criminal activity is also suggestive of inadequate amounts of sleep. Rather than persistent, increasingly serious delinquent behaviors starting at a young age typical of most criminals, by all accounts Mr. Robinson was a likable, gifted student and athlete prior to late adolescence before a relatively sudden spike in criminal activity occurred. Such dramatic changes in behavior overlap with acute neurobiological changes that result from sleep deprivation. Specifically, even one night without sleep produces alterations in executive functions that impede problem-solving, distort moral judgments, and diminish impulse control (Durmer & Dinges, 2005). When sleep is chronically restricted, these neurocognitive deficits not only worsen but occur in the face of subjective adaptation to the sensation of sleepiness (e.g., Dinges et al., 1997; Philip et al., 2012); meaning that as individuals become sleepier they become less aware of how impaired they are. Thus, the chronic state of excessive sleepiness under which Mr. Robinson functioned during his adolescent years unquestionably played a role in his shaping his decisions, moral judgments, and behaviors.

The role of development must be considered in Mr. Robinson's case as well. Although legally designated an adult when the homicide for which he was convicted occurred, neurobiologically, Mr. Robinson was an adolescent. This point is critical for understanding his behavior at the time, particularly given conditions of chronic sleep loss. The brain continues to undergo substantial remodeling and organization well into the early twenties. Of all brain regions, the prefrontal



cortex (PFC), responsible for planning, attention, foresight, abstract reasoning, judgment, self-monitoring and motor control, is the slowest to mature (Blakemore & Choudhury, 2006). During adolescence, under-development of the PFC relative to other brain systems is reflected by the high propensity for risk-taking and under-estimation of consequences that typify this developmental stage. Because sleep loss degrades the very same functions of the PFC (more so than any other brain region), adolescents who sleep poorly exhibit the greatest risk-taking behaviors (Telzer et al., 2013) and those with extreme levels of sleepiness, such as that reported by Mr. Robinson, are most likely to commit crimes. In fact, adolescents with high levels of daytime sleepiness are 5x more likely than their non-sleepy peers to be convicted of a crime by age 29 (Raine et al., 2017). The relation between adolescent sleepiness and criminal behavior is explained by deficits in attention and other executive functions of the PFC.

Finally, related to the capital crime for which Mr. Robinson was convicted, he is unable to recall when he last slept prior to the crime but vividly described being startled when the victim grabbed him and reported that the gun fired without his full awareness. Consistent with this account, a large body of research demonstrates the multiple ways in which human performance becomes destabilized under conditions of sleep loss, particularly in the face of stress (Goel, Hengyi, Durmer, & Dinges, 2009). Both errors of omission (i.e., a failure to respond in a timely manner) and errors of commission (i.e., responses that are too rapid or too extreme) are commonly observed, as well as a disinhibited startle response to unexpected stimuli. Collectively, these developmental and sleep-based considerations certainly do not provide an excuse for criminal behavior, but they do hold implications for individual culpability.

Respectfully submitted,




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## References Cited

Blakemore, S.J. & Choudhury, S. (2006). Development of the adolescent brain: implications for executive function and social cognition. *Journal of Child Psychology and Psychiatry*, 47, 296–312.

Dinges, D.F., Pack, F., Williams, K., Gillen, K.A., Powell, J.W., Ott, G.E., Aptowicz, C., Pack, A.I. (1997). Cumulative sleepiness, mood disturbance, and psychomotor vigilance performance decrements during a week of sleep restricted to 4-5 hours per night. *Sleep*, 20, 267-77

Durmer, J.S. & Dinges, D.F.(2005) Neurocognitive consequences of sleep deprivation. *Seminars in Neurology*, 25, 117-29.

Goel, N., Rao, H., Durmer, J. S., & Dinges, D. F. (2009). Neurocognitive Consequences of Sleep Deprivation. *Seminars in Neurology*, 29, 320–339.

Philip, P., Sagaspe, P., Prague, P., Tassi, P., Capelli, A., Bioulac, B., Commenges, D., & Taillard, J. (2012). Acute Versus Chronic Partial Sleep Deprivation in Middle-Aged People: Differential Effect on Performance and Sleepiness. *Sleep*, 35, 997–1002.

Raine, A. & Venable, P. (2017) Adolescent daytime sleepiness as a risk factor for adult crime. *Journal of Child Psychology and Psychiatry*, 58, 728-35.

Telzer, E. H., Fuligni, A. J., Lieberman, M. D., & Galván, A. (2013). The effects of poor quality sleep on brain function and risk taking in adolescence. *NeuroImage*, 71, 275-83.